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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,655	06/22/2001	Avraham T. Freedman	12293-79	7163
50086	7590	02/24/2006	EXAMINER	
LAW OFFICE OF DAVID H. JUDSON			JOO, JOSHUA	
15950 DALLAS PARKWAY			ART UNIT	
SUITE 225			PAPER NUMBER	
DALLAS, TX 75248			2154	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/887,655	FREEDMAN, AVRAHAM T.	
	Examiner	Art Unit	
	Joshua Joo	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Remarks filed on 12/9/2005

1. Claims 1-13 are presented for examination.

Response to Arguments

2. Applicant's arguments, filed 12/9/2005, with respect to the rejection(s) of claim(s) 1 and 13 under Tirosh et al, US Publication #2003/0141093 (Tirosh hereinafter), in view of Schoffelman et al, US Patent #6,119,170 (Schoffelman hereinafter), and claim 10 under Tirosh, in view of Callon US Patent #5,633,866 (Callon hereinafter) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made under Halme, US Patent #6,912,200 (Halme hereinafter), in view of Myers et al, US Publication #2003/0079005 (Myers hereinafter).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5, 6, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halme, in view of Myers.
5. As per claims 1 and 13, Halme teaches substantially the invention as claimed including the apparatus and a router for connectable to a plurality of destination networks through at least first and second transit networks, comprising:

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code executed in accordance with a set of one or more configurable parameters to initiate path quality measurements for each of a set of transit network/destination links (Col 5, lines 40-45; Col 6, lines 14-46. Measures each combination source and destination ISPs.),

code executed following the path quality measurements for evaluating whether a first transit network / destination network link is a candidate for rerouting to a second transit network / destination network link (Col 5, lines 20-25; Col 6, lines 14-21. Identify connections for routing traffic.); and

code responsive to satisfaction of a given path evaluation criteria and being executed to establish a communication with the router to facilitate a reroute from the first to the second transit network / destination network link (Col 6, lines 14-21. Change source and destination ISPs for routing traffic for connections with best through and minimal change.).

6. Halme teaches substantial features of the claimed invention including an apparatus for changing routing configuration with a plurality of ISPs, and continuously monitoring the network when there is traffic over the network and sending probes to monitor the network when routes are inactive (Col 5, lines 40-52). However, Halme does not explicitly teach that the apparatus is for use with a router, performing periodic path quality measurements, configuring an overriding test route identifying each transit network/destination network link is configured into the router at the time of the path quality measurement and then withdrawn after the measurement.

7. Myers teaches of nodes communicating with routers (Paragraph 0011-0013); performing periodic path quality measurements (Paragraph 0093); configuring routes identifying links to reach nodes of different networks at the time of time of the path quality measurement, and then withdrawing the routes after the measurement (Paragraph 0093, 0095-0097).

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8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Halme and Myers because both teachings deal with measuring the performance of links between networks and providing the best connection between networks. Furthermore, the teachings of Myers to provide the method of Paragraph 6 would improve the system of Halme by providing data that would ensure that the connections with the best performance may be consistently used for routing and implementing links that will provide best network performance as taught by Myers.

9. As per claim 10, Halme teaches substantially the invention as claimed including a method of controlling a router connectable to a plurality of destination autonomous systems through at least first and second transit autonomous systems, comprising:

conducting local traffic analysis of outgoing packets transmitted to a set of IP addresses in the destination autonomous systems (Col 5, lines 40-45; Col 6, lines 22-46. Measures traffic transmitted to destination ISPs.);

based on the collected data during the local traffic analysis, selecting a best transit autonomous system for a given autonomous system given the then-existing connectivity conditions (Col 6, lines 14-21. Selects source and destination ISP based on measurements.); and

automatically logging into the router and entering a new configuration to cause the router to reevaluate all routes heard from the selected transit autonomous system according to the new configuration (Col 3, lines 53-55; Col 6, lines 14-21; Claims 1 and 2. Select source ISP and change connections.).

10. Halme teaches substantial features of the claimed invention including continuously monitoring the network when there is traffic over the network and sending probes to monitor the

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network when routes are inactive (Col 5, lines 40-52). However, Halme does not teach of periodically conducting traffic analysis.

11. Myers teaches of periodically measuring the links between networks (Paragraph 0093).

12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Halme with the teachings of Myers because the teachings of Myers to periodically measure links would improve the system of Halme by providing data that would ensure that the connections with the best performance may be consistently used for routing.

13. As per claim 2, Halme teaches of changing configuration by gateway nodes. However, Halme does not explicitly teach the apparatus as described in claim 1 further including an interface for enabling setting of the one or more configurable parameters

14. Myers teaches of changing network connection setting among nodes and routers through BGP (Paragraphs 0012-0013; 0093).

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Halme and Myers because the teachings of Myer to provide an interface to routers to set configurable parameters would improve the teachings of Halme by providing a method for communicating with routers in the network and changing the routing.

16. As per claim 3, Halme teaches the apparatus as described in claim 2, wherein the configurable parameters include a probe type (Col 5, lines 46-52. Probe packets.).

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17. As per claim 5, Halme teaches the apparatus as described in claim 2, wherein the configurable parameters include a list, identifying destination networks links to evaluated (Col 14-26. Measure destination IP connections.).

18. As per claim 6, Halme teaches the apparatus as described in claim 2, wherein the configurable parameters include a given IP address within a given destination network (Col 6, lines 1-10. IP address of destination ISP.).

19. As per claim 12, Halme teaches the method as described in claim 10, wherein the best transit autonomous system for a given destination autonomous system is selected according to a given path evaluation algorithm (Col 6, lines 14-21. Best throughput connection is selected.).

20. Claims 4, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halme, and Myers, in view of Klinker et al, US Publication #2002/0145981 (Klinker hereinafter).

21. As per claims 4 and 11, Halme teaches of recording the round trip times between source and destinations. However, Halme does not teach the apparatus as described in claim 3, wherein the probe type is an ICMP packet.

22. Klinker teaches of using an ICMP packet to measure the network (Paragraph 0064-0065).

23. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Halme, Myers, and Klinker because the teachings of Klinker to use an ICMP packet would improve the system of Halme and Myers by providing additional measuring parameters for assessment of the network to make routing changes

24. As per claim 8, Halme does not teach the apparatus as described in claim 1 wherein the test route is configured into the router by establishing an internal BGP (iBGP) peering session over which routing update information identifying the test route is passed.

25. Klinker teaches of communicating new routing tables to a router using an iBGP session (Paragraph 0126).

26. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Halme, Myers, and Klinker because all three teachings deal with measuring the network to make routing decisions. Furthermore, the teachings of Klinker to use an iBGP session to communicate to the router and performing routing update would improve the system of Halme and Myers by providing protocol for the routers to communicate with each other within the autonomous network.

27. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Halme and Myers, in view of Lenander, US Patent #6,401,129 (Lenander hereinafter).

28. As per claim 7, Halme teaches the invention of claim 1, where the apparatus has code responsive to satisfaction of the given path evaluation criteria (Col 6, lines 14-18. Select connection.). However, Halme does not teach the apparatus being executed to output a recommendation illustrating a reroute from the first to the second transit network/destination network link.

29. Lenander teaches of providing information recommending change of route to nodes (Col 7, lines 15-19).

30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Halme, Myers, and Lenander because the teachings of Lenander to send information recommending a change of route would improve the system of Halme and Myers by allowing input from other apparatus' and receiving additional information before effecting network changes.

31. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Halme and Myers, in view of Shafter, US Publication #2002/0191619 (Shafer hereinafter).

32. As per claim 9, Halme does not teach the apparatus as described in claim 1 wherein the test route is configured into the router by establishing a secure connection between the apparatus and a configuration program executing in the router.

33. Shafer teaches of establishing a secure connection with a router and submitting configuration requests to change router configurations (Paragraph 0006-0007).

34. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teachings of Halme, Myers, and Shafter because the teachings of Shafer to establish a secure connection with the router and having a configuration program executing in the router would improve the system of Halme and Myers by preventing unauthorized connection to the router and allowing the router to accept and change configurations.

Conclusion

35. This action is made non-final due to Examiner's new ground(s) of rejection.

36. A shortened statutory period for reply to this Office action is set to expire THREE

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MONTHS from the mailing date of this action.


37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Thursday 8AM to 5PM and every other Friday.

38. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on 571 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

39. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 17, 2006

JJ

JOHN FOLLANSBEE
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